

WHAT IS CLAIMED IS:

1. A system which projects a vibrating object onto an image projecting means for observation, said system comprising:

an image-pickup section for picking up an image of said object at a constant cycle;

a frequency detecting section for detecting the frequency of said vibration;

a frequency dividing ratio setting section for variably setting a frequency dividing ratio with respect to the detected frequency;

a trigger output section for outputting a trigger signal at a frequency obtained by dividing the detected frequency at the frequency dividing ratio set by said frequency dividing ratio setting section; and

a video image making section capable of outputting to said image projecting means only an image picked up by said image pickup section immediately after each trigger signal is outputted.

2. A vibrating object observing system according to claim 1, wherein said frequency dividing ratio setting section has a handle for manually adjusting said frequency dividing ratio within a predetermined range.

3. A vibrating object observing system according to claim 1, wherein said frequency dividing ratio setting section has a frequency dividing ratio automatic setting function for automatically setting a frequency dividing ratio suitable for observing a vibrating state of said vibrating object.

4. A vibrating object observing system according to claim 1, wherein said video image making section includes:

an image storage section for receiving for storage therein an image for one field from said image pickup section so as to output the image to said image projecting means; and

an image storage control section for controlling the storing operation of said image storage section in accordance with on said trigger signal.

5. A vibrating object observing system according to claim 1, wherein said image pickup section includes an endoscope which can be inserted into a larynx of a person to be inspected so that an image of a vocal cord of said person can be obtained;

said frequency detecting section includes a voice collecting section for collecting a voice generated by said person, and an extracting section for extracting a basic frequency of the collected voice as said vibrating frequency to be detected;

thereby said vibrating object observing system is provided as a vocal cord observing system in which a vocal cord serves as an object to be observed.

6. A processing apparatus used for said vocal cord observing system according to claim 5, said apparatus comprising a housing in which said extracting section, said trigger output section, said video image making section, a connecting terminal connected directly or indirectly to said endoscope, a connecting terminal connected to said image projecting means, and a connecting terminal connected to said voice collecting section are mounted.